

WHAT IS CLAIMED IS:

1. An airbag system comprising:

a driver airbag module;

a passenger airbag module;

5 a driver seat belt sensor detecting whether a driver seat belt is latched or not;

a passenger seat belt sensor detecting whether a passenger seat belt is latched or not;

a passenger occupation detection unit for detecting whether a passenger seat is occupied by a passenger or not;

10 a driver seat belt warning device for warning of an unlatched state of the driver seat belt;

a passenger seat belt warning device for warning of an unlatched state of the passenger seat belt;

15 a first control unit controlling the driver airbag module and the passenger airbag module, the first control unit configured to receive information on whether the driver seat belt is latched, information on whether the passenger seat is occupied by the passenger, and information on whether the passenger seat belt is latched, and the first control unit generating a belt condition signal based on the received information; and

20 a second control unit receiving the belt condition signal from the first control unit, the second control unit controlling operations of the driver seat belt warning device and the passenger seat belt warning device, based on the belt condition signal.

2. The airbag system of claim 1, wherein the belt condition signal generated by the first control unit is a pulse width modulation signal.

25 3. The airbag system of claim 2, wherein a duty ratio of the pulse width modulation signal varies according to the information on whether the driver seat belt is latched, the information on whether the passenger seat is occupied by the passenger, and the information on whether the passenger seat belt is latched.

30 4. The airbag system of claim 3, wherein the duty ratio of the pulse width modulation signal generated by the first control unit is one of first, second, third, and fourth predetermined duty ratios, the duty ratio of the pulse width modulation signal being the first predetermined duty ratio if the driver seat belt is latched and if the passenger seat is not occupied by the passenger or the passenger seat belt is latched; the

duty ratio of the pulse width modulation signal being the second predetermined duty ratio if the driver seat belt is unlatched and if the passenger seat is not occupied by the passenger or the passenger seat belt is latched; the duty ratio of the pulse width modulation signal being the third predetermined duty ratio if the drive seat belt is latched and if the passenger seat is occupied by the passenger and the passenger seat belt is unlatched; and the duty ratio of the pulse width modulation signal being the fourth predetermined duty ratio if the drive seat belt is unlatched and if the passenger seat is occupied by the passenger and the passenger seat belt is unlatched.

5 5. The airbag system of claim 4, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the first predetermined duty ratio, the second control unit controls both of the driver seat belt warning device and the passenger seat belt warning device to not operate.

10 6. The airbag system of claim 4, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the second predetermined duty ratio, the second control unit controls the driver seat belt warning device to operate and the passenger seat belt warning device to not operate.

15 7. The airbag system of claim 4, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the third predetermined duty ratio, the second control unit controls the driver seat belt warning device to not operate and the passenger seat belt warning device to operate.

20 8. The airbag system of claim 4, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the fourth predetermined duty ratio, the second control unit controls both of the driver seat belt warning device and the passenger seat belt warning device to operate.

25 9. The airbag system of claim 1, further comprising a seat belt warning buzzer that is controlled by the second control unit according to the belt condition signal.

 10. The airbag system of claim 9, wherein the belt condition signal is a pulse width modulation signal.

30 11. The airbag system of claim 10, wherein the duty ratio of the pulse width modulation signal generated by the first control unit is one of first, second, third, and fourth predetermined duty ratios, the duty ratio of the pulse width modulation signal being the first predetermined duty ratio if the driver seat belt is latched and if the

passenger seat is not occupied by the passenger or the passenger seat belt is latched; the duty ratio of the pulse width modulation signal being the second predetermined duty ratio if the driver seat belt is unlatched and if the passenger seat is not occupied by the passenger or the passenger seat belt is latched; the duty ratio of the pulse width modulation signal being the third predetermined duty ratio if the drive seat belt is latched and if the passenger seat is occupied by the passenger and the passenger seat belt is unlatched; and the duty ratio of the pulse width modulation signal being the fourth predetermined duty ratio if the drive seat belt is unlatched and if the passenger seat is occupied by the passenger and the passenger seat belt is unlatched.

12. The airbag system of claim 11, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the first predetermined duty ratio, the second control unit controls both of the driver seat belt warning device and the passenger seat belt warning device to not operate.

13. The airbag system of claim 11, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the second predetermined duty ratio, the second control unit controls the driver seat belt warning device to operate and the passenger seat belt warning device to not operate.

14. The airbag system of claim 11, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the third predetermined duty ratio, the second control unit controls the driver seat belt warning device to not operate and the passenger seat belt warning device to operate.

15. The airbag system of claim 11, wherein if the duty ratio of the pulse width modulation signal generated by the first control unit is the fourth predetermined duty ratio, the second control unit controls both of the driver seat belt warning device and the passenger seat belt warning device to operate.

16. The airbag system of claim 1, wherein each of the driver seat belt warning device and the passenger seat belt warning device is a warning lamp.